Energy Efficient Congregation Facilities Save Money and Care for Creation

When a congregation plans to build a new facility or expand an existing one, are there good reasons to consider energy saving technologies? Do these technologies cost more? What kinds of technologies might be considered? How can the best choices be made?

Initial Versus Long Term Costs
A building committee planning new construction may overlook "no-cost, low-cost" or high "return-on-investment" energy-saving technologies such as passive solar orientation; shading and water saving landscaping; sealing air leaks; and office equipment (computers, printers, faxes), selecting energy-efficient appliances (refrigerators, dish-washers), systems (lighting, air-conditioning, heating, water heater, windows, roofing), and materials (insulation, recycled materials). These purchases may be "driven" by initial cost rather than long-term costs, and financial analysis.

While the initial cost of the best technologies may be a little higher, this cost often can be recouped quickly by reduced operating costs. Purchasing a range of efficient technologies can earn a 25 to 30% reduction in operating costs. Thus, it does not make sense to focus only on initial cost, and ignore long term operating costs for the lifetime of the new construction. As with buying clothes, cars or other goods, the cheapest price may not be the best buy.

Stewardship—the Right Thing to Do
There are two good reasons for congregations to use energy-saving technologies in construction: stewardship of funds and stewardship of creation.

Stewardship of funds
Pragmatically, new construction must not only be affordable and meet congregational space needs, but must include reliable systems and equipment that has low operating costs. ENERGY STAR labeled equipment helps consumers find these features to save money on maintenance and utility bills. Wasted energy is wasted money.

Stewardship of creation
Most faiths have a tradition of religious, ethical concerns regarding the stewardship of creation—the earth's natural resources and eco-systems that support all life. Wasted energy not only wastes money, but natural resources and unnecessarily pollutes the environment.

Emissions from coal-fired electric plants as well as the mining and transportation of fossil fuels have ecological impacts. Wasted energy worsens the impact of acid rain/runoff (hurts forests, crops, fisheries) and ground level ozone (human health).

Virtually all scientists agree that excessive burning of fossil fuels is causing global climate change, due to increasing atmospheric carbon dioxide—a "greenhouse" gas. Climate change, or "global warming," has the potential to change the conditions of life on the entire planet, adversely affecting the distribution and health of bodies of water, forests, croplands, fisheries, coastlines, weather, and species' survival.

Take up the Stewardship Challenge
Energy-efficient technologies can help your congregation be better stewards of money and creation. Will your congregation take up the challenge to become more energy-efficient so that you might help leave a cleaner, more livable planet for future generations? Let us help.

Become a partner in ENERGY STAR. You'll receive free, unbiased technical information and support for your building committee, architects, and contractors. Visit www.epa.gov/congregations or call toll free at 1-888-STAR-YES to become a partner, and receive your free 100-page guide *"Putting Energy into Stewardship."*

Visit www.energystar.gov for information and savings calculators on products and products (appliances, office equipment, lighting) that have earned the ENERGY STAR label. The label makes it easier to make an energy-efficient purchase. Look for the ENERGY STAR label when you shop for your congregation, home, or business.

When your congregation makes choices effecting energy use, you are also making choices about the stewardship of natural resources, as well as your operating budget. The ENERGY STAR label stands for superior energy performance, not only for financial stewardship, but also to help prevent pollution. When choosing equipment, select products labeled with the "ENERGY STAR" logo to ensure an energy-efficient purchase.

(The product savings shown in the table below are based on comparing new non- ENERGY STAR model units to new ENERGY STAR labeled units.)

Product Type	Annual Savings			Comments
	$	KWh	Lbs. of CO_2	
Compact Fluorescent Lamps (CFLs)*	**$25**	250	410	ENERGY STAR labeled CFLs can last up to 5 years; this is longer than 10 equivalent incandescent bulbs.
Light-Emitting Diode (LED) Exit Signs*	**$51**	307	503	ENERGY STAR labeled LED exit signs lamps can last 25 years without replacement, compared to less than 1 year for incandescent bulbs. This saves on maintenance costs. LED signs are brighter; therefore, safer.
Computer CPU & Monitor*	**$22**	281	460	Besides saving energy and money, a "sleeping" computer generates less heat, and attracts less dust, which extends the life of the equipment.
Refrigerator*	**$35**	450	738	A refrigerator that is 10 years or older uses twice as much energy as an ENERGY STAR refrigerator.
Photo Copiers **	**$34**	558	915	Along with ENERGY STAR savings, consider "duplex" copying (uses both sides of the paper). Shop for a model with duplex speed at least 80% as fast as 1-sided copying.
Light Commercial HVAC ***	**$200 to $300**	2,500 to 3,750	4,000 to 6,000	Coming in January 2002, savings of 15 to 20% with ENERGY STAR labeled light commercial HVAC equipment.

Assumptions:
** Savings calculations are based on average ENERGY STAR usage and cost assumptions from the ENERGY STAR Labeled Products Web site at www.energystar.gov/products/.*

*** Savings calculations are based on average ENERGY STAR usage and cost assumptions from the FEMP Web site at www.eren.doe.gov/femp/procurement/begin.html.*

**** Savings calculations are based on a light commercial HVAC capacity of 65,000 Btu/h at a typical usage rate of 3,000 hours per year.*